

# Relative power and efficiency as a main determinant of banks' profitability in Latin America

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## Abstract

Despite the financial sector liberalization and openness that started in the earlier 90's and significant macroeconomic development as well as increasing inflow of capital toward the region, there is not any evidence of the reduction of interest rates as well as banks' profits in Latin America. In this paper we develop a model to estimate the determinants of Latin American banks' profitability and, try to understand the reasons why banks are reluctant to decrease their interest rate spreads even when change in competitiveness in the financial system is improving. By using Data Envelopment Analysis to better exploit the information of several variables at the same time and, by employing a sample of 200 Banks located in Argentina, Bolivia, Brazil, Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Peru, Uruguay and Venezuela; we find that banks' profits grew consistently above the normal levels of profits adjusted by risk. Our results show that banks in Latin America have been profiting from their oligopolistic position in detriment of their clients in particular and of their whole economy in general.

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## 1. Introduction

During the 90's most of Latin American economies started to open their economies and to liberalize their financial systems which were mostly controlled by their governments until then (Quispe-Agnoly & McQuerry, 2001). During this period

it was observed that the composition of banks' assets within the region changed and that a significant inflow of foreign capital moved toward their banking systems. Capital inflows took the form of foreign direct investments and portfolio inflows.<sup>3</sup> During the 90's the region got an inflow of 180 billions of dollars (Cravino, Lederman, & Ollareaga, 2007). However, banks' competitiveness did not necessarily improve after this period of financial liberalization and capital growth.

In Tables 1 and 2 we present information about three of the most representative countries in our sample. The information in these tables corresponds to the years 1990 and 2007; respectively. Table 1 shows that besides the significant participation of foreign capital in the banking system, there is still an evident banking concentration: The top 5 banks of each of the

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<sup>3</sup> An additional form of capital inflow took the form of remittances.

Table 1  
Banks' deposit concentration in Latin America before liberalization (1990).

Country	Number of banks	Foreign-owned banks (%)	Deposit in top 5 banks (%)	GDP growth (%)
Argentina	105	51	44	−1.338
Brazil	149	n.a.	19	−4.168
Peru	18	41	77	−5.09

This table presents some statistics for a subsample of countries under study. The data presented in this table corresponds to 1990.

Table 2  
Banks' deposit concentration in Latin America after liberalization (2007).

Country	Number of banks	Foreign-owned banks (%)	Deposit in top 5 banks (%)	GDP growth (%)
Argentina	122	31	47	9.179
Brazil	167	54	27	3.160
Peru	22	59	71	6.827

This table presents some statistics for a subsample of countries under study. The data presented in this table corresponds to 2007.

economies presented here captured between 44 and 77% of the overall deposits in the system. This table shows that concentration and market imperfection, i.e. oligopoly, appears to be a typical characteristic in the banking system in this region.<sup>4</sup>

From Tables 1 and 2,<sup>5</sup> we can observe that Brazil and Argentina have the largest number of banks. However and even though both countries have more than 100 banks, their banks' deposit concentration is not only high but also has increased since 1990 from 44% to 47% and from 16% to 27% for Argentina and Brazil, respectively. Peru's concentration has decreased (from 77% to 71%) but it is still one of the highest in the region. Accordingly, the size of the country or the number of banks does not matter and, apparently, there is always a high concentration ratio that has not been wiped out with the financial liberalization and the inflow of capital towards the region.

Banks' concentration in Latin America can be traced back to the early 1900s when the Kemmerer's mission promoted the ongoing concentration in the Latin-American financial system (see Drake, 1989).<sup>6</sup> Kemmerer advised to accelerate bank concentration and at the same time to amplify credit availability. Kemmerer's suggestions made the number of banks in Colombia to decrease from 35 in 1924 to 16 in 1930. However,

the number of regional branches multiplied.<sup>7</sup> The same was observed in the other countries that he advised.

Kemmerer's plans seemed to have achieved its goals as the number of credits and deposit soared in the countries he visited. Moreover, similar policies to the ones suggested by Kemmerer were implemented in other Latin American countries that he did not visit.

Kemmerer's basic idea goes along with the tradeoff between bank's efficiency and stability (Northcott, 2004). Banks' efficiency and competitiveness normally implies a large number of banks competing and, by competition, efficiency is achieved. However, efficiency and competitiveness does not assure stability of the system as it has been seen in this region: whenever there was a significant capital outflow, small banks were not able to withstand and most of them closed. According to Kemmerer, the latter situation could be offset by increasing the concentration in the banking sector allowing large banks to be less vulnerable to bankruptcy and runs.<sup>8</sup>

On the other hand, it has been shown in several studies that efficient functioning of the banking sector and financial openness contributes to economic growth and development (Graff, 2003; Kim, Lin, & Suen, 2012; King & Levine, 1993; Levine, 1997). Other empirical studies (i.e. Fernandez (2005)) have proved empirically the existence of bank lending channels especially in Latin America. According to this literature, banks are not only crucial for economic growth but they are also in an industry that in general is more unstable than other ones. This instability could have pernicious consequences in the economy as a whole. For instance as demonstrated by Peltonen et al. (2011) unexpected variation in the cost of capital and the lending rate has a negative effect on investment especially in the Latin American case. Northcott (2004) points out the following reasons that can explain banks' instabilities:

- A bank's balance sheet consists of short-term deposits on the liability side and, long-term assets that are illiquid. This leaves banks vulnerable to runs in the presence of uncertainty and/or sudden stops in capital flows.
- Highly leveraged banks have an incentive to engage in risky behavior. If the gamble works, shareholders benefit; if it does not, the lenders bear the cost. This is a typical agency problem for banks. There is also asymmetrical information because depositors are not well informed of a bank's activities and potential risks.

However, Casu, Girardone, and Molyneux (2013) found different result in the relationship between competition stability and competition-fragility described by Northcott (2004). They found empirically some difficulties associated with competition and risk in banking industry. In this paper we focus on the

<sup>4</sup> Claessen and Laeven (2004) found some interesting results regarding a free entry of foreign banks in an environment of restriction to banks' activity. Contestability is relevant and they claim that there is no evidence of negative relationship between concentration and competitiveness. However, they contrast to the literature of tradeoff between stability-competition (Northcott, 2004).

<sup>5</sup> We have verified the same structure in the remaining countries. The selection of countries follows GDP and outstanding performance during the 90's. Bank concentration turns out to be slightly higher after 1990 as well as foreign participation.

<sup>6</sup> Edwin W. Kemmerer (1875–1945) was an American economist who advised some Latin-American countries, promoting plans to reform the financial system, fiscal and monetary policies. He advised the governments of the Philippines (1904), Mexico (1917), Guatemala (1919), Colombia (1923), Chile (1925), Ecuador (1926) and Peru (1931).

<sup>7</sup> It is important to note that the four foreign banks present in this country at that time became even larger than before.

<sup>8</sup> Ennis (2005) shows the relevance of large banks in the US and how important they are in the financial system. However, it is also noted that the failure of any large bank may collapse the financial system even in a country like US.

determinants of banks' profitability without discussing the relationship between competition-stability (fragility). We plan to work on this relationship as future research.

Based on the issues described above, our starting hypothesis is that internal relative power and efficiency play against interest rates reductions in the Latin American case. In particular, we are interested about the relationship of banks' concentration and efficiency in the system, which potentially can explain the reasons why interest rates did not decrease and, incorporate this knowledge to understand the determinants of banks' profitability for a sample of banks in this region. For this, we use measures of efficiency, bank concentration and relative power that may play important role in determining banks' profitability.<sup>9</sup> Recent literature such as Kasman and Carvalho (2013) has also shown us that "banks with market power ... seem to be able to pass on to customers the cost of raising capital buffers and provisioning for risk" which leads us to believe that we will find a significant relationship between market power and efficiency.

In addition, we analyze the latter variables under the four hypothesis claimed by Berger (1995) for an American dataset of banks. Three of them are: Relative Market Power (RMP), Structure Conduct Performance (SCP) and Efficient Structure Economy (ES). The Relative Market Power hypothesis claims that firms with large market shares and well-differentiated products are able to exercise market power (Monopolistic Competition). The Structure Conduct Performance asserts that concentration permit less favorable condition to consumers: low rates of deposits and higher loan rates.<sup>10</sup> Finally, the Efficient Structure claims that size matter for profits because they are scale-dependent. Efficient Structure permit higher profits because a firm is able to produce at lower cost in comparison to their competitors.

Our findings presented below suggest that efficiency accounts for most of the profitability attained by banks. However, our results also show that concentration (measured as the natural logarithm of banks' total assets) is also an important factor explaining banks' profitability. This latter finding together with the fact that our efficiency measure considers banks' management decision making process by incorporating the necessary input allocation and product mix decision needed to attract deposits and make favorable loans and investments, controlling at the same time for all risks (market, credit, liquidity, interest, inflation, among others), shows that banks' profits grew consistently above the normal levels of profits adjusted by risk, i.e. meaning that banks in Latin America have been profiting from their oligopolistic position in detriment of their clients in particular and of the whole economy in general.

The paper is organized as follows. Section 2 presents a brief description of the data used in this paper and Section 3 develops the model specification describing the Data Envelopment Analysis used to construct our relative efficiency variable for Latin American banks, Section 4 describes the results and Section 5 concludes.

## 2. Data

The data used in this paper comes from banks' financial statements (balance sheets and income statements). The banks in our sample are located in Argentina, Bolivia, Brazil, Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Peru, Uruguay and Venezuela. Table 3 presents some descriptive statistics of our sampled banks. It is important to note that Paraguay and Venezuela have lower shares of equity in comparison with their pairs in the region; however, their shares of deposits are higher. For Venezuela, the study period considers the time financial openness and control of capitals.

As soon as our purpose is to understand what happened to the banking system in terms of efficiency and concentration and their impact on banks' profitability without considering "abnormal" or crises related periods, our dataset contains annual observations that covers the years 1989–2005.<sup>11</sup> The period of analysis correspond to the period after financial openness, the Asian and Russian Crisis that significantly hit the Latin American region and, just before the subprime or global financial crisis that started by mid-2007.<sup>12</sup>

Moreover, we use macroeconomic data from the central banks: Gross Domestic Product discount rates and exchange rates<sup>13</sup> to account for market or systemic variability.

## 3. Model specification

As we mentioned before, there is a trade-off between concentration and efficiency in banking and, Latin American banks' have not been the exception. Also, as observed in Tables 1 and 2, the liberalization and openness of the financial markets did not change the banking structure in the region.<sup>14</sup> The period under study allow us to test the determinants of banks' profitability based on the literature of concentration versus efficiency. We explore possible causes of banks' reluctance to drop interest rates in an environment with good macroeconomic performance as well as openness and financial liberalization and, social and political stability. In particular, our hypothesis is that if banks' profits grew consistently above the normal levels of profits adjusted by risk, this could imply that banks are simply profiting from their oligopolistic position in detriment of their clients in particular and of the whole economy in general. In this section we describe the empirical model used to test the determinants of banks' profitability exploiting the information on the trade-off between efficiency and concentration of the banking sector in the Latin America.

Besides information on efficiency and concentration, we include in our model several bank-specific variables as well as

<sup>9</sup> Relative power means the bank local enforcement to handle higher shares of deposits and loans within the financial system of a particular country.

<sup>10</sup> Basically RMP and SCP are classified as market power hypothesis and ES is under efficient hypothesis.

<sup>11</sup> In particular we have 2138 observations for the sample of 12 countries.

<sup>12</sup> We were not able to collect recent data. However, our scope is to show the structural changes in the Latin American banking system after financial openness and before the Global Financial Crisis.

<sup>13</sup> GDP was the only significant variable without collinearity problems in the estimation.

<sup>14</sup> Basically the concentration of deposits and assets did not change for the pre and post liberalization periods.

Table 3  
Descriptive Statistics for our sampled banks.

Country	Loans/Assets	Equity/Assets	Average ROE	Deposits/Loans
Argentina	0.421	0.216	−8.798	0.396
Bolivia	0.614	0.145	−0.777	0.531
Brazil	0.381	0.154	10.407	0.181
Costa Rica	0.635	0.195	12.342	0.344
Ecuador	0.481	0.220	14.170	0.124
El Salvador	0.593	0.150	0.671	0.238
Mexico	0.589	0.193	−0.631	0.228
Nicaragua	0.520	0.038	30.798	0.282
Paraguay	0.504	0.142	13.983	1.139
Peru	0.574	0.121	6.923	0.224
Uruguay	0.548	0.386	−2.391	0.000
Venezuela	0.383	0.151	38.099	1.114

Table shows the descriptive statistics for the banks in our sample.  
Source: Bankscope and authors' calculations.

some macroeconomic variables that can potentially affect our relationships. We follow [Forster and Shaeffer \(2005\)](#) who used bank efficiency, size and market share as bank specific controls. [Forster and Shaeffer \(2005\)](#) found that there is a positive relationship between banks' size and efficiency. Larger banks have lower cost per assets, possibly resulting from economies of scale, resulting in lower average costs. Also, according to their findings, large banks tend to receive higher non-interest income per dollar of assets due to their choice of product mix. Finally, they argue that market power and monopsony power helps larger banks to earn more interest income per dollar of assets and, allows them to pay lower interest rates on deposits. In summary, concentration and monopoly power appears to enable banks to get more benefits that can translate into larger profits.<sup>15</sup> We model "power" including a dummy variable that identifies the three largest banks, in terms of their shares of deposit, per country.<sup>16</sup> Finally and following [King and Levine \(1993\)](#) and [Levine \(1997\)](#), we also include real GDP growth rate in our model to control for any external factor that may impact banks' profitability.

We use Data Envelopment Analysis (described in detail below) to create a variable to control for banks' efficiency. We define "size" as the natural logarithm total assets, which is the proxy for Efficient Structure Hypothesis of [Berger \(1995\)](#). Our endogenous variable is the return on equity (ROE) which is a proxy for banks' profits. Also, our model specification takes into account the time effect by using period-dummies. Based on this, the econometric specification is as follows:

$$ROE_{ijt} = \alpha + \beta_1 Power_{ijt} + \beta_2 EFF_{ijt} + \beta_3 \Delta GDP_{jt} + \beta_4 Size_{ijt} + \beta_5 Time_t + \varepsilon_t \quad (1)$$

Where,  $ROE_{ijt}$  stands for return on equity for bank "i", country "j" at time "t", Power represents dummy that takes on the value of 1 if the bank is within the largest three banks (in terms

of their deposits share) within a country;  $EFF^{17}$  represents efficiency as estimated with the DEA methodology,  $\Delta GDP$  stands for real GDP growth rate and Size represents the logarithm of banks' total assets. Finally, Time is a dummy variable that captures the time effect.

In the next section we explain the results of applying the DEA methodology to estimate the relative efficiency of banks in Latin America.

### 3.1. Data Envelopment Analysis

Our interest in this section is to present the way we determine banks' efficiency. In the past, average productivity of labor was used to measure efficiency, but this indicator failed to use all the information of inputs and outputs available ([Farrell, 1957](#)). [Cooper, Seiford, and Zhu \(2004\)](#) provided the following definition of "relative efficiency" that solves the problem of the efficiency indicator used in the past:

*"A Decision Making Unit (DMU) is to be rated fully efficient on the basis of available evidence if and only if the performances of other DMUs do not show that some of its inputs or outputs can be improved without worsening some of its other inputs or outputs".*

In order to account or better estimate banks' relative efficiency, we use DEA (Data Envelopment Analysis) technique with Output. The DEA comes from the original work of [Charnes, Cooper, and Rhodes \(1978\)](#) as well as [Farrell \(1957\)](#). The latter introduced the basic idea of measuring relative efficiency using Euclidean distances from a given observation to an optimal "relative frontier". The word "relative" is used because it is constructed based on sample information. A DMU (Bank in our case) located on the frontier receives a score of one while Banks located below the frontier receive scores lower than one. [Charnes et al. \(1978\)](#) introduced a linear program to estimate measures of efficiency by introducing several inputs and outputs at the same time.

In this paper we used as inputs: Fixed Assets, Deposits and Money Market Funding plus Time Deposit Interest Expense and Personnel Expenses. The outputs are Interest Income and Total Earning Assets. The selection of inputs goes in line with the banking literature. Basically our model considers banks' management decision making process by incorporating the necessary input allocation and product mix decisions needed to attract deposits and make favorable loans and investments, controlling at the same time for all risks (market, credit, operational, liquidity, interest, inflation risks, among others). We use the same idea of [Berger and Mester \(2003\)](#) and [Barr, Killgo, Siems, and Zimmer \(1999\)](#).<sup>18</sup> Next section describes the results of the model presented in this section.<sup>19</sup>

<sup>15</sup> See also in [Berger \(1995\)](#).

<sup>16</sup> This can be the proxy to test Relative Market Power described in Section 1. [Berger](#) used different variables however, the variables used in this paper are a good proxy of [Berger's](#) Hypothesis.

<sup>17</sup> It is also a proxy for Efficiency Structure described in Section 1.

<sup>18</sup> There are more approaches besides the described above. Also [Charnes, Cooper, Sun, and Huang \(1990\)](#) and [De Young \(1998\)](#).

<sup>19</sup> Also [Charnes et al. \(1990\)](#) and [De Young \(1998\)](#).



#### 4. Results

Table 4 presents the summary statistics of efficiency for each country and for all periods. For the case of Chile we were unable to estimate the efficiency due to a lack of access to data within the country. This indicator of efficiency is a relative ranking for each of the countries under assessment. For example, if a bank in Argentina gets a score of 1, it does not mean that the bank is the best for the whole Latin American region but only with respect to Argentina, in this example.

Table 5 shows the summary statistics for each period of time. This is an average measure for the whole sample of countries. The estimation is able to replicate the drop of efficiency during the Asian Crisis and Russian crisis of 1998. Then later efficiency recovered steadily up to 2005, the end of our period of study.

The following table presents the results of the model specification described above. We have four different models that combine different specification of the basic model. Some models control for year effect. We cannot include Size and Power at the same time due to high correlation between these two variables.<sup>20</sup> In models 3 and 4, we have added the variable “Size” and obtained positive results, which support our conclusion that market power and size of banks avoid drop of bank’s margins.<sup>21</sup>

In Table 6 we can observe that the efficiency variable (EFF) is always positive and statistically significant, meaning that the better a bank manages its inputs and outputs, the higher its profits are. This result goes in line with the study of Berger (1995).<sup>22</sup>

The variable Power is always positive but statistically non-significant which goes along the line of Berger (1995) hypothesis for Relative Market Power. The variable Size is always positive and significant which goes along the line of the hypothesis of Berger (1995) of Efficient Structure Economy. The last two results combined imply that there is an influence of local concentration (measured by Power) plus Size that avoids the drop of spreads. The hypothesis of Berger has been proved for a Latin American Sample.<sup>23</sup> Note that the magnitude of this variable is not small as it accounts for almost 40% of the influence of the variable efficiency.<sup>24</sup>

<sup>20</sup> The  $R^2$  was typically low for the type of specification that we have considered. Our purpose is not to predict but to find the explanatory variables for Earnings Returns, a proxy for banks’ profits.

<sup>21</sup> However, besides Forster and Shaeffer (2005) there is a paper of Chortareas et al. (2002) and Berger (1995) who goes along the line with our results. The latter is proved for an American sample but the former is tested for a Latin American dataset of banks.

<sup>22</sup> This supports the hypothesis of efficiency structure described in Section 1.

<sup>23</sup> Berger also claims the Structure Conduct Hypothesis where benefits cannot be obtained as long as banks are big and concentrate most of the loans and deposits. We may infer this situation from our results with the variables power and size.

<sup>24</sup> We obtain this number dividing the value of the coefficient related to Size by the value of the coefficient of efficiency (EFF). For example, looking at model 3 results, the coefficient related to efficiency equals 18.699 and the one from market concentration equals 7.082, i.e. accounts for approximately 40% of the magnitude of the first one.

Table 4

Summary statistics of efficiency by country.

Country	Median	Min	Max	First quartile	Median	Third quartile	Std
Argentina	0.701	0.052	1	0.413	0.764	1	0.30
Bolivia	0.956	0.652	1	0.916	1	1	0.07
Brazil	0.717	0.080	1	0.518	0.668	1	0.08
Chile <sup>1/</sup>	n.d	n.d	n.d	n.d	n.d	n.d	n.d
Colombia	0.935	0.605	1	0.868	1	1	0.60
Costa Rica	0.968	0.563	1	1	1	1	0.56
Ecuador	0.875	0.518	1	0.711	1	1	0.52
El Salvador	0.960	0.313	1	1	1	1	0.31
Mexico	0.962	0.314	1	1	1	1	0.31
Paraguay	0.971	0.634	1	0.979	1	1	0.63
Peru	0.963	0.538	1	1	1	1	0.53
Uruguay	0.932	0.273	1	1	1	1	0.27
Venezuela	0.918	0.399	1	0.872	0.987	1	0.40

The Table shows the summary statistics of efficiency by country.

Source: Authors’ estimations. Efficiency estimates range from 0 to 1. Score of 1 indicates maximum efficiency within the country while scores that are lower than 1 indicate various levels of inefficiency.

As has been seen these results support the hypothesis claimed by Berger for a different set of data. However, our results contrast with the ones obtained by Forster and Shaeffer (2005), who found that large banks are not necessarily an artifact of market power. However, we agree with them in their argument that market power and monopsony power help larger banks to earn more interest income per dollar of assets and, allow them to pay lower interest rates on deposits, respectively.

The variable GDP is always positive (statistically significant under models 1 and 4) meaning that good macroeconomic conditions affect positively banks’ profitability. Basically this variable is relevant for bank loans, deposits as well as profitability. Downturns in the GDP cycles deteriorate banks’

Table 5

Summary statistics of efficiency by period.

Period	Mean	Min	Max	1Q	2Q	3Q
1989	0.976	0.928	1	0.928	1	1
1990	0.945	0.382	1	1	1	1
1991	0.996	0.909	1	1	1	1
1992	0.954	0.508	1	0.973	1	1
1993	0.946	0.476	1	0.973	1	1
1994	0.844	0.176	1	0.703	1	1
1995	0.876	0.144	1	0.762	1	1
1996	0.909	0.409	1	0.862	1	1
1997	0.800	0.080	1	0.544	1	1
1998	0.739	0.217	1	0.487	0.797	1
1999	0.769	0.265	1	0.501	0.915	1
2000	0.814	0.077	1	0.610	0.944	1
2001	0.809	0.081	1	0.632	0.929	1
2002	0.857	0.052	1	0.778	1	1
2003	0.797	0.101	1	0.597	1	1
2004	0.850	0.231	1	0.714	1	1
2005	0.944	0.403	1	0.926	1	1

The Table shows the summary statistics of efficiency by period. Efficiency estimates range from 0 to 1. Score of 1 indicates maximum efficiency for the overall region while scores that are lower than 1 indicate various levels of inefficiency.

Source: Authors’ estimations.

Table 6  
Determinants of ROE.<sup>a</sup>

Variables	Model 1	Model 2	Model 3	Model 4
Constant	−7.669 (5.1855)	−6.288 (7.8132)	−32.415*** (9.8188)	−29.952*** (7.1924)
Power	7.624 (4.7091)	6.516 (4.7683)		
EFF	15.986*** (5.7446)	18.030*** (5.8868)	18.699*** (5.8454)	17.003*** (5.6981)
GDP	0.468** (0.2256)	0.434 (0.2786)	0.455 (0.2779)	0.4543** (0.2250)
Size			7.082*** (1.5976)	6.852*** (1.5406)
Time Dummy	NO	YES	YES	NO
Observations	2138	2138	2138	2138
R <sup>2</sup>	0.0157	0.0265	0.0508	0.0433

The Table above shows the results of our estimations using Equation (1). ROE<sub>ij,t</sub> stands for return on equity for bank “i”, country “j” at time “t”, Power represents dummy that takes on the value of 1 if the bank is within the largest three banks (in terms of their deposits share) within a country; EFF represents efficiency as estimated with the DEA methodology, GDP stands for real GDP growth rate and Size represents the logarithm of banks’ total assets. Finally, Time is a dummy variable that captures the time effect. \*\*\* Significant at 1%, \*\* Significant at 5%, \* Significant at 10%.

<sup>a</sup> We have run the Hausman test and rejected the possibility of Random Effects in the sample.

profits. Finally the “Time Dummy” that controls for structural changes from all the periods our dataset exerts no significant influence in the results, the coefficients of the other variables included in the models are consistent and change very little.

## 5. Conclusion

Basically microeconomic or banking variables captured by our efficiency variable estimated using Data Envelopment Analysis methodology and macroeconomic conditions of a country (proxied by the changes in GDP) positively influence banks’ profitability (measured as the return on equity). Also, whenever we control for size (local power) or market concentration we also found a positive, statistically significant (insignificant) and large in magnitude effect on banks’ profitability.

This latter finding together with the fact that our efficiency measure considers bank management decision making process by incorporating the necessary input allocation and product mix decision needed to attract deposits and make favorable loans and investments, controlling at the same time for all risks (market, credit, liquidity, interest, inflation, among others), shows that banks’ profits grew consistently above the normal levels of profits adjusted by risk, meaning that banks in Latin America have been profiting from their oligopolistic position in detriment of their clients in particular and of the whole economy in general. These results also could explain inefficiencies in terms of non-observed decreases on banks’ interest rates throughout the Latin American region.

The results of the paper test the hypothesis of Relative Market Power (RMP), Structure Conduct Performance (SCP) and Efficient Structure (ES) claimed by Berger for an American Dataset. We have concluded that the latter hypothesis holds for our Latin American sample. It means that bank’s

profits depend on size (ES hypothesis) as well as Power (RMP) and both together make Structure Conduct Performance (SCP) hypothesis to hold.

Our result is relevant for policy makers who look for alignment of interests between banks and customers in particular and economic development in general. Note however, that we have not considered the tradeoff between efficiency and stability which was beyond the scope of our study. Whenever we look for efficiency to drop bank’s profits then a problem of bank stability may be triggered. We leave this interesting topic for future research.

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